13 Please add the following new claim 19:

~~15~~ 19. A compound which is selected from the group consisting of ~~(2-aminothiazol-4-yl)acetamido]-2-[2-(4-methylthiazol-5-yl)vinyl]~~ 7-[2-methoxyimino-2-(2-aminothiazol-4-yl)acetamido]-3-cephem-4-carboxylic acid (anti-isomer, trans-isomer, or syn-isomer, cis-isomer), a sodium salt ~~(the carboxylate)~~ thereof, a pivaloyloxymethyl ester ~~(the carboxylate)~~ thereof, a (5-methyl-2-oxo-1, 3-dioxolene-4-yl)-methyl ester ~~(the carboxylate)~~ thereof and an acid addition salt thereof with trifluoroacetic acid.

IN THE SPECIFICATION:

Page 2, line 25, delete "as the" and "compound,";

Page 3, line 1, delete "as";

line 2, delete "we" and after "exhibit" insert --activity in--;

line 3, after "of" insert --the-- and change "sepctrum" to --spectrum and--;

line 6, delete "of" in the first occurrence;

line 6-7, delete "We have ... this invention.";

Page 7, line 17, change "cepahlosporin" to --cephalosporin--.

R E M A R K S

Reconsideration of the application is respectfully requested.

As requested, a new title has been provided and the specification corrected of grammatical and idiomatic errors.

Claims 1-9, 12, 14, 16, 17 and 18 have been rejected under 35 USC 112, first and second paragraphs for the reasons 1 through 8 given on pages 2-3 of the Office Action. The above amendments address and overcome each of these objections.

The cancellation of claim 17 renders moot the rejection of this claim.

Claims 1-4 and 6-13, 15, 16 and 18 have been rejected under 35 USC 103 as being unpatentable over Farge. This rejection is respectfully traversed.

As the applicant describes on page 2, line 7, to page 3, line 7, and on pages 27-28 of the specification, applicant's new 3-vinylcephalosporins of the formula (I) have unexpectedly improved antibacterial characteristics in that they are highly active not only against gram-positive bacteria inclusive of Staphylococcus aureus, but also against gram-negative bacteria, including the Proteus species. Thus, applicant's novel compounds of the formula (I) exhibit activity a very wide range of the antibacterial spectrum.

In contrast, the cephalosporins of the prior art are usually less active against either the gram-positive bacteria or the gram-negative bacteria. The Examiner's attention is directed to page 2, lines 15-17, of the Dunn reference. In order to demonstrate this, applicant is submitting herewith a Declaration.

Besides, as the applicant describes on page 32, line 15, to page 34 of the specification, the compounds of formula (I) are easily absorbed through the intestines of animal when given orally, and maintain their antibacterial activity in vivo until they have been excreted into the urine. Thus, they advantageously are able to exert their high antibacterial potency against a wide variety of gram-positive and gram-negative bacteria in vivo for a long time. This is also demonstrated in Mr. Atsumi's Declaration.

Comparing the structure of the applicant's compounds (I) with the structure of the cited Farge's compounds, the Examiner says, "The major difference between applicant's compounds and

Farge's is the sulfur atom in Farge between the vinyl and ring moieties" and that "One of ordinary skill in the art would expect applicant's compounds, given the minor difference in structure, to retain the antibiotic utility of Farge's compounds". It is respectively submitted that the Examiner's conclusion is clearly based on hindsight. After reading the Farge et al reference, one of ordinary skill in the art must assume that the "sulfur atom" in the Farge's compounds plays a role in the antibacterial activity of the Farge's compounds. To say that in the antibacterial activity of the Farge's compounds would remain if the sulfur atom were eliminated from the molecule is clearly hindsight. Accordingly, applicant does not consider it possible that one of ordinary skill in the art would expect the applicant's compounds, given the difference in structure, to retain the antibiotic utility of Farge's compounds.

Claims 1-4, 6-16 and 18 under 35 USC 103 have been rejected as being unpatentable over Beattie et al in view of Berger, Farge, Fulenmeier and further in view of Dunn. This rejection is also respectfully traversed.

The 7-position substituents and the 3-position substituents taught by the Beattie reference and other cited references are each of a wide variety, so that the number of possible combinations of the different 7-position substituents with the different 3-position substituents in cephalosporins is theoretically very numerous. The specific combination of the particular nature of the 7-position substituent with the particular nature of the 3-position substituent observed with the applicant's new 3-vinylcephalosporins is not obvious from the teachings of Beattie et al and the other cited references as long as a hindsight has not been obtained from the applicant's new compounds.

In any event, applicant's compounds provide unexpected superior results with respect to antibiotic activity over the prior art compounds and these superior results are demonstrated by Mr. Atsumi's Declaration. In view of these unexpected results and for the reasons advanced above, it is respectfully submitted that the claims define subject matter that is patentable over the art cited.

Early reconsideration and allowance are earnestly solicied.

Respectfully submitted,

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